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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/513,687	02/25/2000	Yong-Hoon Lee	1316.1041/MDS	7481

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WASHINGTON, DC 20005

EXAMINER
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FERGUSON, LAWRENCE D

ART UNIT	PAPER NUMBER
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1774

19

DATE MAILED: 06/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/513,687

Applicant(s)

LEE ET AL.

Examiner

Lawrence D Ferguson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 April 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 31-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Response to Amendment***

1. This action is in response to the request for reconsideration mailed April 21, 2003. Claims 1, 7, 12 and 27 were amended rendering claims 1-30 pending.

***Claim Rejections – 35 USC § 103(a)***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (U.S. 5,470,627) in view of Vedamuttu (U.S. 6,165,391).

Lee discloses a double-sided optical storage disk comprising a substrate having a microstructure formed on each side surface, where the microstructure is in the form of grooves (abstract) where grooves are analogous to track guides. Lee discloses, formed on each of the side surfaces from the substrate outward are a reflective layer, dielectric layer, recording layer and transparent protective layer (column 4, lines 27-34). Lee shows hills of a peaked hood shape in figure 4. Lee additionally shows embossed microstructures of one side of the substrate protruding towards the protective layer of the second side of the substrate and narrows towards the protective layer in Figure 4, as amended in instant claim 1. Although Lee does not explicitly disclose the height of

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the peaked hood shape or grooves or the thickness of the protective layer, height and thickness are optimizable. It would have been obvious to one of ordinary skill in the art to optimize the components because discovering the optimum or workable values involves only routine skill in the art. Although Lee does not show the second micro-embossments protruding toward the second protective layer, as in instant claim 7, it would have been obvious to one of ordinary skill in the art to reverse the embossments of Lee as depicted in Applicant's instant Figure 3, because a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167. Lee does not explicitly disclose micro-embossments protruding from the substrate.

Vedamuttu teaches providing micro-embossment(s) on the surface of an optical disc (column 3, lines 66-67). Lee and Vedamuttu are analogous art because they are from the field of optical discs. It would have been obvious to one of ordinary skill in the art to include the micro-embossments of Vedamuttu on the substrate of Lee because Vedamuttu teaches the micro-embossments can visually enhance the disc (column 4 lines 52-54).

### ***Response to Arguments***

4. Rejection made under 35 USC 112, first paragraph, has been withdrawn due to amendment of claims 1, 12 and 27.

Remarks in regard to the rejection under 35 USC 103(a) as being unpatentable

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over Lee et al. (U.S. 5,470,627) in view of Vedamuttu (U.S. 6,165,391) have been considered but are not found persuasive. Applicant argues the grooves of Lee are defined not to protrude from the substrate but to be cut into the substrate. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Although Lee does not explicitly disclose micro-embossments protruding from the substrate, Vedamuttu teaches providing micro-embossment(s) on the surface of an optical disc (column 3, lines 66-67). Applicant argues Lee does not disclose micro embossments protruding towards the protective layer as recited in claims 1, 12 and 27. Examiner respectfully disagrees because Lee shows embossed microstructures of one side of the substrate protruding towards the protective layer of the second side of the substrate and narrows towards the protective layer in Figure 4. Applicant argues Lee fails to show Applicants' reflective, dielectric, recording and protective layers. This is not true because Lee discloses, formed on each of the side surfaces from the substrate outward are a reflective layer, dielectric layer, recording layer and transparent protective layer (column 4, lines 27-34). Applicant argues the instant first and second protrusions protrude towards the respective protective layers, where Lee lacks this limitation. Although Lee does not show the second micro-embossments protruding toward the second protective layer, as in instant claim 7, it would have been obvious to one of ordinary skill in the art to reverse the embossments of Lee as depicted in Applicant's

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instant Figure 3, because a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167. Applicant argues Vedamuttu does not describe a shape and location of the micro-relief pattern on a substrate. This is of little consequence because the purpose of the Vedamuttu reference is to teach the conventionality of micro-embossment(s) on the surface of an optical disc. Applicant argues the micro-relief pattern of Vedamuttu is formed to provide a holographic image. Applicant is arguing intended use of the prior art, which is given little patentable weight. Applicant reiterates neither reference teaches micro-embossments and first protrusions formed on a substrate having flat portions. Lee discloses a double-sided optical storage disk comprising a substrate having a microstructure formed on each side surface, where the microstructure is in the form of grooves (abstract) where grooves are analogous to track guides. Lee discloses, formed on each of the side surfaces from the substrate outward are a reflective layer, dielectric layer, recording layer and transparent protective layer (column 4, lines 27-34). Lee shows hills of a peaked hood shape in figure 4. Lee additionally shows embossed microstructures of one side of the substrate protruding towards the protective layer of the second side of the substrate and narrows towards the protective layer in Figure 4, as amended in instant claim 1 and Vedamuttu teaches providing micro-embossment(s) on the surface of an optical disc (column 3, lines 66-67).

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is (703) 305-9978. The examiner can normally be reached on Monday through Friday 8:30 AM – 4:30PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703) 308-0449. Please allow the examiner twenty-four hours to return your call.

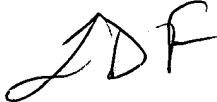
The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for

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After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2351.



Lawrence D. Ferguson  
Examiner  
Art Unit 1774

CYNTHIA H. KELLY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

